

RESEARCH FUNDING AGENCIES' SUPPORT FOR OPEN ACCESS

Frederick J. Friend, OSI Open Access Advocate, f.friend@ucl.ac.uk

Introduction.

Access to publications derived from publicly-funded research world-wide is being hindered by financial and technical barriers, so that users of academic literature in rich and poor countries alike cannot gain access to all the research papers they need. Faced with subscription charges rising well above normal inflation, libraries across the world are cancelling large numbers of journal titles. Access to journals from smaller academic societies has been hit particularly hard as the major scientific publishers “bundle” journals to secure purchase by library consortia. This trend is leading to the concentration of journal publishing in fewer publishers at far higher cost to the public purse. By contrast with this scenario of increasing problems with the traditional scholarly publication system, the open access movement offers increased access for no greater overall cost to the academic community than the present system. In this paper two possible ways to solve current problems and improve access are set out, and research funding agencies are invited to consider whether either or both ways forward may improve access to publications arising from research they have funded. Many leading funding agencies – such as the Howard Hughes Medical Institute, the Wellcome Trust, the Max Planck Society and CNRS – have already declared their support for open access.

A way forward: fund publications as part of the research process.

A route to improved access is through the ready availability of research papers, accessible by anybody with a network connection, with publication costs funded as part of the research process. Several research funding organisations in various countries are already providing encouragement for authors publishing in peer-reviewed open access journals or institutional repositories. This form of high-quality publication can exist alongside conventional publication and indeed many publishers have started or are considering trials of open access publication.¹ The advantages in such a system of publication to all stakeholders in scholarly communication (including publishers) and responses to concerns that may be expressed about the open access publication model are outlined below.

Benefits :

- For the funding agency, greater use and exploitation of research results following a higher number of readers, facilitating further research.
- For the author, increased readership, as academic content on open web-sites is read more widely than content on closed web-sites.

¹ A list of peer-reviewed open access journals is at www.doaj.org .

- For academic institutions, more publicity for the research conducted at the institution and the release of funds currently spent on costly library subscriptions.
- For readers and users of research papers, access to research publications without barriers imposed by subscription or access-prevention technology.
- For developing countries, access to research results currently inaccessible due to financial and technical restrictions.
- For society at large, greater returns from investment in the funding of research as research publications are used more widely. This can contribute to the public's understanding of science by providing access to all interested people.

There are questions to be considered in enabling an open access system of publishing to succeed in delivering these benefits:

- For the author, concern about a negative reaction from traditional publishers frightened of new trends in scholarly communication, with the consequential fear of a loss of promotion prospects. (*Comment : several major academic publishers are exploring the possibility of a move from subscriptions to an open access economic model and are looking for a signal from the funding agencies that open access publication is supported by the agencies. The attitude of the funding agencies is also the key to the acceptance by universities of open access publication in promotion procedures.*)
- For the funding agency, concern that funds intended for research will be used for publication. (*Comment : there is no new principle being proposed here for those funding agencies that already fund page charges or colour charges for traditional publications. For all funding agencies, more free access to existing research publications is likely to enable research funded by those agencies to be conducted more efficiently and therefore provide better value for money. The cost of searching multiple publisher-owned databases and obtaining copies of journal articles will be reduced substantially by using open source software linked to barrier-free journal content. The delays experienced by research staff in waiting for documents on inter-library loan will be eliminated by open access to the literature. Publication fees in peer-reviewed open access journals are typically \$500 - \$1500 and in many cases will only form a small percentage of the cost of the funded research.*)
- For academic institutions, concern about acquiring a reputation for buying publication for their academic staff. (*Comment : payment of a publication fee does not buy publication for an author any more than purchase of a subscription buys favours for authors. Submitted papers still have to pass full peer-review and editorial procedures. Also open access publication fees are not page charges, being based upon a complete switch in the economic model rather than being combined with subscription payments.*)
- For publishers, concern that the current publishing structure will be undermined.

(Comment : there is no reason why all publishers should not continue to publish under an open access economic model and still make a reasonable profit. Publishers are not harmed by deposit on personal or institutional web-sites. Publishers switching to an open access economic model will find that they are competing for authors on the level of publication fee in relation to the services offered - cf. the potential competition between BioMedCentral charging a publication fee of \$500 and Public Library of Science charging a publication fee of \$1500. In order to allay the concerns of publishers, research into future business models is being undertaken in partnership with organizations representing publishers.)

- For society at large, concern that the quality of academic research will be diluted.
(Comment : there is no risk of dilution of quality of publication provided that peer-review and other quality standards are maintained in open access publication. There are already several hundred peer-reviewed open access journals available with rejection rates as high as any conventional journal.)

Another way forward: increase access to institutional academic content.

A second route to improved access is through the availability of academic content on institutional web-sites. The increases in library budgets currently used to pay for a decreasing number of journal subscriptions could possibly be used more effectively to fund institutional web-site storage of journal articles written by the institution's staff. The large number of such "institutional repositories" now established in universities across the world will permit access to a wide range of articles reporting academic research, whether or not those articles are also published in conventional journals. Some funding agencies are considering the creation of their own repositories for the deposit of research reports and publications derived from research they have funded.

The availability of the text of journal articles through institutional web-sites should be accompanied by authors' retention of copyright or rights of re-use in the outputs of intellectual endeavour. Intellectual property agreements between authors and publishers designed for the print era need to be revised to take account of the opportunities and challenges presented by electronic publication. Complete assignment of copyright to the publisher may need to be replaced either by retention of copyright by the author or by qualified assignment to the publisher. Resolving these IPR issues will require the joint attention of institutions, funding councils, research councils, authors and publishers. The advantages in the use of university and funding agency repositories and responses to concerns about this open access model are described below.

Benefits :

- For universities and funding agencies, establishing an institutional repository enables the organization to publicise its research and teaching programmes by providing access to the work of its staff. The quality of a university's academic output forms an effective advertisement for the institution or for the research funded by the funding agency.

- Academic organizations across the world gain from easier access to the research conducted in other organizations. Academic work available through university repositories is read more widely than work published in paper format or in commercial electronic databases.
- Depositing academic work in a university or funding agency repository increases the profile of an author on a world-wide basis, magnifying the impact of the research they undertake.
- Deposit in a university or funding agency repository can also ease the administrative burden of reporting publications for research assessment and review exercises.

There are questions to be considered in making university or funding agency repositories an effective form of scholarly communication:

- Although universities or funding agencies may see their own interests best-served by making as much content as possible available on open access, there may be some material to which the organization may wish to restrict access to specified groups of users. *(Comment: the material to which an organization might restrict access is likely to be material either created and intended for internal use or not ready for general release. In either case, technology can be used to restrict access to appropriate readers.)*
- The cost of setting up an institutional repository has to be considered carefully. *(Comment: the evidence from those universities which have set up repositories is that the set-up costs are not high given an existing information-service infrastructure. Most academic information is already produced in digital format and can be added relatively easily to an existing web-site. Experience has to be gained in determining the long-term maintenance costs for an institutional archive, but the cost to an organization of preservation in an institutional repository should be no greater than the payments to a publisher or other third party to undertake long-term preservation.)*
- The quality of academic content in an institutional repository has to be ensured. *(Comment: for the sake of their own reputation, universities or funding agencies will wish to ensure that academic content on their web-site is of a high standard. Some content will have been peer-reviewed as part of a conventional publication process.)*
- Plagiarism has to be prevented or identified if it occurs. *(Comment: given adequate technical measures, the identification of plagiarism in an electronic text is easier than the identification of plagiarism in a hand-written copy from a printed text. Clear copyright statements are required for all content deposited in an institutional repository so that the user knows what is permitted in respect of lawful copying.)*

Ways forward.

The possible solutions outlined above are essentially collaborative developments with implications for institutional leaders. The areas of decision-making each group of stake-holders may wish to consider are described below.

For funding agencies already permitting page charges for publications - to consider making clear to grant recipients that the research grant can be used to pay open access publication fees upon acceptance after peer-review up to an agreed level in lieu of page charges.

For funding agencies presently not supporting page charges - to consider amending grant regulations to allow for the payment of open access publication fees up to an agreed level.

For all funding agencies - to consider issuing a policy statement expressing support for institutions and authors in taking steps to improve access to research outputs. This statement could build upon existing statements such as the Berlin Declaration, a statement of intent to make progress towards open access supported by 28 leaders of funding agencies.²

For universities - to consider encouraging academic staff to deposit the text of published journal articles into open web-site repositories, informing academic staff of the possibility of modifying any copyright agreement they are asked to sign by publishers to allow for deposit in a university repository, and adapting their tenure and promotion policies to allow credit for peer-reviewed open access publication.

Conclusion

An opportunity exists to make a dramatic change in the availability of research publications, an opportunity described in the Budapest Open Access Initiative³. The large number of open access journals and open access web-sites are making research publications available to a wider group of readers with no financial or technical barriers. Many European institutions already involved in international initiatives such as SPARC Europe⁴ and the Berlin Declaration in support of open access initiatives. The research funding agencies are invited to increase the effectiveness of these international and national programmes by supporting authors in their use of these publication outlets. The benefits to the social, economic and medical well-being of humankind from open access are incalculable, and research funding agencies have a key role to play in achieving these benefits.

² The text of the Berlin Declaration and the list of signatories is at www.zim.mpg.de/openaccess-berlin/berlindeclaration.html

³ The outcome of a meeting called by the Open Society Institute www.soros.org/openaccess/ .

⁴ A group of European libraries working for change in scholarly communication www.sparceurope.org .

